

Curriculum Vitae



Frederick Kuehn

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EDUCATION

The Ohio State University
Ph.D. (2008); *Finding gamma ray bursts at high energies and testing the constancy of the speed of light*
Advisor: Brian Winer
M. S. (2005)

The University of Toronto
Hons. B. Sc. with Distinction (2001)
Mathematics and Physics

EMPLOYMENT

Fermilab Center for Particle Astrophysics Postdoc (08 -)

AWARDS

Presidential Fellowship (2007)
Recognizes "the outstanding scholarly accomplishments and potential of graduate students entering the final phase of their dissertation research or terminal degree project."
(The Ohio State University)

APS DPF travel award (April Meeting — 2006)

Fowler Fellowship (2001 - 2004)

Departmental admission fellowship (The Ohio State University)

The Mary Emily Pearson Scholarship (1997 - 1998)

Admission award (Victoria College at The University of Toronto)

SERVICE

FNAL Particle Astrophysics Seminar Committee (09 - 11)

Founded Annual Ohio State Graduate Student Poster Competition (06 - 08)

Founded Ohio State Graduate Student Seminar Series (07 - 08)

Ohio State Physics Graduate Student Council member (01 - 05, 06 - 07)

Ohio State Mount Leadership Society Porter / mentor (05 - 07)

Ohio State University Policy and Standards Committee member (03 - 04)

Ohio State MLK Day of Service volunteer (03 - 08)

PHYSICS

OUTREACH

Quarknet lecture on Pierre Auger Observatory to high school teachers (Su 10)

Charge! presentation at St. Mary Immaculate school in Plainfield - Lederman Center outreach

Quarknet EVO discussion on cosmic rays with students and teachers (Spr 10)

Meeting with middle and high school students visiting FNAL (09 - 10)

Quarknet MasterClass at Fermilab Instructor and lecturer (Spr 09)

Guiding middle schoolers to do high energy physics analysis

GRASP Ohio State Summer Girls Camp Instructor (Su 08)

2007 Alpheus Smith "Pre-Lecture"

An introductory lecture for high school students on the physics presented at the Alpheus Smith public lecture

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SELECTED PAPERS

- “Measurement of the energy spectrum of cosmic rays above 10^{18} eV”
J. Abraham et al., <http://arxiv.org/abs/1002.0699v1>
- “A limit on the variation of the speed of light arising from quantum gravity effects” Abdo et al., <http://arxiv.org/abs/0908.1832>
- “Prospects for GRB Science with the Fermi Large Area Telescope”
D.L. Band et al., <http://arxiv.org/abs/0906.0991>
- “Fermi Observations of High Energy Gamma-Ray Emission from GRB 080916C”
Abdo et al., 2008, *Science*, DOI: 10.1126/science.1169101
- “The Large Area Telescope on the Fermi Gamma-ray Space Telescope Mission”
W. B. Atwood et al., 2009, *ApJ* **697**, 1071 -1102
- “Dependence of Galaxy Shape on Environment in the Sloan Digital Sky Survey”
Frederick Kuehn and Barbara Ryden, 2005, *ApJ*, **634**, 1032 - 1042

CONFERENCE PROCEEDINGS

- “Constraining Quantum Gravity with GLAST”
Proceedings CPT '07, Indiana University, Bloomington, August 2007
- “LAT Onboard Science: Gamma-Ray Burst Identification”
Proceedings First GLAST Symposium, Stanford, February 2007

PRESENTATIONS ORAL

- “AIRFLY: Precise measurement of the absolute yield of fluorescence photons in atmospheric gases”
International Symposium on Very High Energy Cosmic Ray Interactions
- “Approaches to anisotropy searches in UHECRs”
CCAPP Anisotropy workshop 2010
- “Anisotropy and chemical composition in the direction of Cen A”
Pierre Auger Observatory Collaboration Meeting 2010
- “Constraining Quantum Gravity with GLAST”
Fourth Meeting on CPT and Lorentz Symmetry, August 2007
- “Searching for Quantum Gravity with Gamma Ray Bursts”
Great Lakes Cosmology Workshop 8, July 2007

POSTERS

- “The Pierre Auger Observatory”
Fermilab Users Meeting 2009
- “LAT Onboard Science: Gamma-Ray Burst Identification”
First GLAST Symposium, Stanford, February 2007
Winning poster in the Annual Ohio State Physics Graduate Student Poster Competition

PROFESSIONAL SOCIETIES

American Physical Society

LANGUAGES

English - native
French - proficient

RESEARCH INTERESTS

Cosmic Ray sources and composition
Gamma Ray Astrophysics
Large Scale Structure
Tests of Fundamental Physics
Gravity